

SECTION THREE

Selecting Waste Management Methods

SELECTING MANAGEMENT METHODS

In designing a collection program, it is important to determine what will happen to the wastes that are collected. When selecting among various waste management options, HHW program planners should try to recycle or offer for use as much of the collected wastes as possible. The HHW that cannot be recycled or used should be managed as a hazardous waste. If the communities use contractor services to manage some or all of this HHW, waste management priorities and procedures should be communicated clearly to the hazardous waste contractor.

In addition, it is essential that the program planners investigate the soundness of any facility where the waste will end up—particularly if CESQG waste is accepted (see Appendix A). The planners should ask potential contractors about the methods they will use to manage the wastes, and they should also ask for copies of the permits for the hazardous waste facilities that are to be used. Planners can also contact the state hazardous waste agency (see Appendix B) to find out if a facility is properly permitted.

Reduce through Use

Reusing materials brought to HHW collections can reduce the amount of HHW that the contractor must manage, often significantly lowering program costs. Some communities have set up waste exchanges to make materials available for other participants' use. These exchanges can take place at a HHW drop-off site or through telephone/hotline referrals. For example, reusable paint can be placed on "drop-and-swap" tables for collection program participants to pick up, or it can be bulked and blended for use by people or institutions who request the paint. This "second-hand" paint is readily accepted by the public, community groups, religious and recreational centers, graffiti removal programs, and

schools. Experience shows that paint exchanges can reduce the amount of paint being disposed of at HHW collections by as much as 90 percent.¹

Managing Latex Paint

EPA recently prohibited mercury in indoor latex paint. Latex paint exchange programs and disposal, however, still must be carefully managed.

Interior latex paint manufactured before August 20, 1990, might contain mercury. For this reason, all latex paint in a paint exchange or "drop-and-swap" program should be assumed to contain mercury and labeled "FOR EXTERIOR USE ONLY." Using interior paint outside will substantially reduce the risk from exposure to mercury. Interior paint used outside, however, might not hold up as well as paint originally manufactured for exterior use. Alternatively, interior latex paint may be swapped for interior use if mercury levels of less than 200 parts per million (ppm) can be confirmed. This can be done in several ways

- A commercial laboratory can test the paint for mercury.
- The National Pesticides Telecommunications Network (800-858-7378) provides names of paint brands that contain less than 200 ppm of mercury.
- The date of manufacture might appear on the label; no interior latex paint manufactured after August 20, 1990, contains mercury. No paint manufactured after September 30, 1991, may contain mercury.

Usable latex paint can be consolidated and then might or might not be reprocessed. The consolidated paint should be tested for mercury. If it contains more than 200 ppm, it must be labeled "FOR EXTERIOR USE ONLY."

Unusable latex paint (such as paint that is frozen or solidified) that contains more than 200 ppm of mercury should be managed as hazardous waste.

¹Duxbury, Dana and Philip Morley. 1990. Overview of collection & management methods. Proc. of the Fifth National Conference on Household Hazardous Waste Managements, November 5-7, 1990, San Francisco, California, pp. 251-274.

Other materials suitable for reuse can include unwanted pesticides, cleaning products, and automotive products. These materials often can be used by the sponsoring municipality for its buildings and vehicles. Communities should offer products only if they are in the original container and the label is intact and legible. They should not offer products if the container is banned, leaking, rusting, or otherwise damaged. Products should not be repackaged for reuse.

save money because they often are staffed by the sponsor. Communities that send HHW off site for recycling should contact their state environmental regulatory agencies to identify recyclers and to verify that the recycler is reputable (see Appendix B for a list of state regulatory agencies).

The results of the State of Florida's "Amnesty Days" show the great potential for recycling HHW received at one-day

Recycling

A significant percentage of HHW can be recycled. For example, used oil can be rerefined for use as a lubricant. It also can be reprocessed for burning as a supplemental fuel (as can oil-based paint and ignitable liquids). EPA has issued several publications to help communities safely collect and recycle used oil (see Appendix C, Project ROSE).

Other recyclable HHW includes:

- Antifreeze.
- Latex paint. (Up to 50 percent of latex paint can be recycled by filtering, bulk-ing, and blending it for reuse.)
- Lead acid batteries. Lead used in dental x-rays.
- Mercury-oxide, mercury-silver, silver-oxide, and nickel-cadmium household batteries. Several firms in the United States take these batteries for a fee; the contractor can be required in the contract to investigate the option of shipping used batteries to one of these firms for recycling.
- Fluorescent light bulbs.

Some communities sponsor "recyclables-only" days to divert the large-volume materials (motor oil, car batteries, and latex paint) from HHW collections and to reduce the amount of waste that the contractor has to receive, package, and process. Recycling days

Recycling Used Oil Project ROSE

For over 14 years, a trailblazing program in Alabama has worked to stimulate the collection of used automobile oil for recycling. Project ROSE (Recycled Oil Saves Energy) has taken the lead in helping communities across the state develop used oil recycling programs tailored to local circumstances.

Project ROSE has built an extensive infrastructure for recycling used automobile oil generated by people who change their own oil (do-it-yourselfers) throughout Alabama. Because much of Alabama is rural, collection centers, in the form of service stations, are the most widely used system. In addition, several larger cities provide curbside collection of used oil.

The program uses publicity and education to develop the momentum to start local used oil recycling programs and then coordinates the effort of established networks by matching buyers of used oil with collectors. This strategy relies heavily on recruiting leaders from local organizations, who then work with Project ROSE to help introduce and support recycling programs in their area.

collections. Thirty-six percent of the HHW collected at 107 Amnesty Days (984,655 pounds out of a total of 2.7 million pounds) was recycled over a two-year period. The recycled material consisted of used oil, car batteries, and latex paint.

Treatment

Treatment technologies reduce the volume and/or toxicity of HHW after it is generated. These technologies include chemical, physical, biological, and thermal treatment. Common treatment procedures are neutralization of acids and bases, distillation of solvents, and incineration. The methods are dictated by the types of waste, proximity to treatment facilities, cost, and the contractor's access to treatment facilities. However, the contract can specify the waste management methods to be used. If the waste is sent off site for treatment, the contractor should provide the sponsor with documentation verifying the waste's final destination.

Landfill

As a result of current and pending bans on land disposal of certain hazardous wastes and the efforts of communities to reduce the amount of HHW sent to municipal solid waste landfills, more HHW is being reused, recycled or treated. As with waste destined for offsite treatment the hazardous waste hauler should provide the sponsor with manifests, state-approved shipping documents, or similar documentation verifying the waste's final destination and showing that the hazardous waste landfill is properly permitted.

Procedures for Excluded Wastes

HHW program planners and contractors often exclude certain wastes from collection programs. Frequently excluded wastes include radioactive materials, explosives, banned pesticides, and compressed gas cylinders. Program organizers must let participants know which wastes will not be accepted and must give them other options and instructions for managing the excluded wastes. For example, the police usually will arrange for pickup of explosives. Smoke detectors, which often contain a minute quantity of radioactive material, are accepted by some manufacturers (see product labeling for instructions). If participants are not provided with alternative management options, they often discard these wastes in the nearest trash can.

Where to Get More Information

Information is available through EPA-sponsored environmental outreach programs

- Informational materials on recycling reuse, disposal, and collection program design are available through: RCRA Hotline 800424-9346; the Waste Watch Center 508470-3044 and the Solid Waste Information Clearinghouse 800-67SWICH.
- With EPA support the International City Managers Association (202-962-3672) and the Solid Waste Association of North America (301-585-2898) provide technical assistance to communities and other nonprofit groups through a peer matching program. This program provides direct, hands advice and assistance on a peer-to-peer basis (e.g., mayor-to-mayor).